

**Rules of the South Florida Water
Management District**

WATER WELLS
Chapter 40E-3, F.A.C.



Amended June 12, 2000

WATER WELLS

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40E-3.010 Review of Water Well Permit Applications. Water Well permit applications are processed pursuant to the provisions of Section 120.60, F.S., Part VI of Chapter 40E-1, F.A.C., and Chapter 28-107, F.A.C.

Specific Authority 120.54(5), 120.60 FS. Law Implemented 120.54(5), 120.60 FS. History — New 7-2-98.

40E-3.011 Policy and Purpose.

(1) The purpose of Chapter 40E-3, Florida Administrative Code, is to implement the duties and responsibilities of the District under Part III, Chapter 373, Florida Statutes, and those responsibilities and duties delegated to the District by the Department of Environmental Regulation relative to regulating the construction, repair, or abandonment of wells and the licensing of water well contractors. It is the policy of the Board that these rules are a reasonable necessity to insure the protection and management of water resources and the health, safety, and general welfare of the people of this District.

(2) The rules in this chapter implement the regulation of wells and well driller water well contractors and include the following parts:

(a) Part I of this chapter establishes a permitting system for the construction, repair or abandonment of wells.

(b) Part II of this chapter establishes the minimum standards for the construction, repair or abandonment of wells.

(3) Additional rules relating to well construction are found in Chapter 40E-5, Florida Administrative Code (Artificial Recharge).

(4) Rules relating to Water Well Contractor Licensing are found in Chapter 17-531, Florida Administrative Code, adopted by reference in Rule 40E-3.037 (Governing Water Well Contractors in Florida).

Specific Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.103(1), 373.306, 373.308, 373.309, 373.313, 373.314, 373.316, 373.319, 373.323(2), 373.326, 373.329, 373.333, 373.342 FS. History — New 1-1-85, Amended 12-19-89.

40E-3.021 Definitions. When used in this chapter:

(1) "Annulus or Annular Space" means any artificially created void existing between a well casing or liner pipe and a borehole wall or the space between two casings or liner pipes.

(2) "Aquifer" means a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield useful quantities of groundwater to wells and springs.

(3) "Casing Diameter" or "Diameter of Casing" means the largest inside diameter of the final casing.

(4) "Contractor" means any person licensed by the Department, or a water management district, in accordance with Chapter 17-531, Florida Administrative Code, and engaged in the business of construction, repair, or abandonment of wells.

(5) "Dewatering" means the use of wells or other such equipment to temporarily lower a water level as may be necessary during construction activities.

(6) "Drive Shoe" means any device specifically designed, fabricated, and installed to protect the end of a well casing or liner pipe from collapse or other damage while the casing or liner pipe is being driven into place in a well.

(7) "Gang Well" means a system where two (2) or more water wells are coupled together with a common header or manifold.

(8) "Grout" means a mixture of water, Portland cement (American Concrete Institute type I, American Concrete Institute type II, Class H, American Concrete Institute type III, or any other types of cement approved by the District), and sand (not more than two parts of sand to one part of cement by weight), and other additives listed under subsection 40E-3.021(12), Florida Administrative Code, or other additives approved by the District. Grout composition shall not exceed six (6) gallons of water per cubic foot of cement.

(9) "Inspection Port" means any opening not less than three-quarters (3/4) inch in diameter through which unobstructed access to the inside of the casing can be obtained for measuring water levels. Inspection ports shall be threaded openings temporarily sealed with a removable watertight plug.

(10) "Liner" means a metallic or nonmetallic pipe which is installed either within the outer casing to improve, repair, or protect the outer casing or below the outer casing to seal off casing material which may be encountered in the open hole of the well.

(11) "Monitoring Well" means a well used primarily to monitor hydrologic parameters such as water levels or water quality.

(12) "Neat Cement Grout" means grout without addition of sand but may include bentonite (not to exceed 5 lbs per 94 lb sack of cement), calcium chloride (not to exceed 3 lbs per 94 lb sack of cement) or retarder (not to exceed 1 lb per 94 lb sack of cement), or other admixtures approved by the District to reduce permeability or shrinkage, increase fluidity, adjust slurry weight and/or control set time. Neat cement grout composition shall not exceed six (6) gallons of water per cubic foot of cement.

(13) "Observation Well" means a well used primarily to observe the elevation of the water table or potentiometric surface or to determine water quality in the aquifer.

(14) "Production Well" means a water well but specifically excludes a test hole, an observation well or a monitoring well.

(15) "Public Water Supply Well" means a well constructed for the purpose of supplying water to a public water system.

(16) "Public Water System" means a system for the provision to the public of piped water for human consumption, if such a system has at least 15 service connections or regularly serves at least 25 individuals daily at least 60 days out of the year.

(17) "Sand-point Well" means any device which is driven into place in unconsolidated earth materials, and which consists of a pipe with an attached perforated metal tube or screen designed to permit the passage of water.

(18) "Test Hole" means an artificial hole in the ground drilled, bored, cored, washed, or jetted, the intended use of which includes obtaining data for engineering and/or for geophysical or geological exploration; prospecting for minerals or products of mining or quarrying; not for the purposes of either producing, disposing of, or searching for water.

(19) "Water Use Permit" means a permit issued under Chapter 40E-2 or 40E-20, Florida Administrative Code.

(20) "Water Well" means a well as defined in section 373.303(7), Florida Statutes.

(21) "Well Casing" means a metallic or non-metallic pipe installed in a borehole to prevent caving, provide structural strength, seal off zones of poor water quality, or prevent the interchange of waters between aquifers.

(22) "Well Completion" means termination of all well construction, repair or abandonment activities in accordance with Part II.

(23) "Well Completion Report" means a form "0124" completed and signed by the person constructing the well in accordance with this chapter.

Specific Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.019, 373.106, 373.303, 373.306 FS. History — New 1-1-85, Amended 12-19-89.

40E-3.031 Implementation. The effective date for rules established in this Chapter:

(a) for Rule 40E-3.037, October 1, 1984

(b) for the remainder of the chapter, January 1, 1985.

Specific Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.103(1), 373.306, 373.308, 373.309, 373.313, 373.314, 373.316, 373.319, 373.323(2), 373.326, 373.329, 373.333, 373.342 FS. History — New 10-1-84.

40E-3.032 Delegation.

(1) The authority for general administration of Part I of Chapter 40E-3, Florida Administrative Code, is delegated to the executive director of the District. It is the policy of the Board that in making this delegation the executive director may designate specific staff members to carry out various tasks but that overall supervision and responsibility shall rest with the executive director. The executive director is expressly authorized to issue permits under this chapter as provided in section 373.342(1), Florida Statutes.

Specific Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.308, 373.309(2), 373.339, 373.342 FS. History — New 1-1-85.

40E-3.037 Water Well Contractor Licensing. Chapter 17-531, Florida Administrative Code, which requires the licensing of water well contractors and includes the Department's Water Well Contractor Disciplinary Guidelines and Procedures Manual, April, 1989 which is incorporated by reference at subsection 17-531.450(5), Florida Administrative Code, is adopted by reference and made part of this rule. The licensing program shall be administered and enforced by the District under the authority delegated to it by the Department of Environmental Regulation.

Specific Authority 373.044, 373.113, 373.171, 373.333 FS. Law Implemented 373.103, 373.308, 373.309, 373.323, 373.324, 373.326, 373.329, 373.333 FS. History — New 10-1-84, Amended 12-19-89.

40E-3.038 Violations of Contractor Licensing Requirements.

(1) Violations of contractor licensing requirements of this chapter are specifically listed at Rules 17-531.380, 17-531.450, and 17-531.500, Florida Administrative Code.

(2) Actions which may be taken by the District upon determination that a violation has occurred are outlined in Chapter 17-531 and Rule 40E-1.612, Florida Administrative Code.

Specific Authority 373.044, 373.113, 373.171, 373.333 FS. Law Implemented 373.323, 373.326, 373.333, 373.336 FS. History — New 12-19-89.

40E-3.039 Penalties. Penalties for violation of this chapter shall be as provided by Chapter 373, Florida Statutes, and Chapter 17-531, Florida Administrative Code, including the Water Well Contractors Disciplinary Guidelines and Procedures Manual as adopted by the Department and delegated to the water management districts.

Specific Authority 373.044, 373.113, 373.171, 373.333 FS. Law Implemented 373.129, 373.308, 373.309, 373.333, 373.336 FS. History — New 1-1-85, Amended 12-19-89.

40E-3.0391 Enforcement. Once the District determines that a violation of licensing provisions of Chapter 40E-3 or 17-531, Florida Administrative Code, has occurred, the District may take enforcement action pursuant to Chapter 373, Florida Statutes, and applicable portions of Chapter 40E-1, Florida Administrative Code.

Specific Authority 373.044, 373.333, 373.119, 373.136, 373.171 FS. Law Implemented 373.119, 373.129, 373.306, 373.333, 373.336 FS. History — New 12-19-89.

PART I REGULATION OF WELLS

40E-3.040 Scope of Part I. The rules in this part relate to the permitting requirements applicable to the construction, repair or abandonment of wells. Unless expressly exempt by statute or this rule, all wells must be permitted prior to construction, repair or abandonment and must be constructed, repaired or abandoned by a licensed water well contractor. This exemption does not relieve the applicant from obtaining permits which may be required under Chapter 40E-2 (Consumptive Use), Chapter 40E-4 (Surface Water Management), Chapter 40E-20 (General Water Use Permits) or Chapter 40E-40 (General Surface Water Management Permits).

Specific Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.303, 373.308, 373.309, 373.316, 373.326, 373.342 FS. History — New 1-1-85.

40E-3.041 Permits Required.

(1) Unless expressly exempt by law or District rule, a well construction permit must be obtained from the District prior to the construction, repair or abandonment of any well within the District.

(2) A well construction permit must be obtained prior to the construction of any gang well, regardless of the size or depth of the individual wells comprising such gang well, for the purpose of procuring or obtaining water other than for dewatering.

(3) No test hole shall be converted to a water well until a well construction permit is obtained.

(4) No monitoring or observation well shall be converted to a production well until a well construction permit or modification thereof is obtained for each production well.

Specific Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.103, 373.309, 373.313, 373.316 FS. History — New 1-1-85.

40E-3.051 Exemptions. The following wells are exempt from Rules 40E-3.101 and 40E-3.201. This exemption does not relieve the applicant from obtaining permits which may be required under Chapter 40E-2 (Consumptive Use), Chapter 40E-4 (Surface Water Management), Chapter 40E-20 (General Water Use Permits) or Chapter 40E-40 (General Surface Water Management Permits).

(1) The wells set forth in Section 373.316, Florida Statutes.

(2) The wells excluded from the definition of "well" under Section 373.303, Florida Statutes.

(3) The wells set forth in Section 373.326(2), Florida Statutes, provided the provisions of Section 373.326(2), Florida Statutes, are satisfied and the well is constructed, repaired or abandoned in accordance with the standards of this chapter and the well completion report is submitted in accordance with Rule 40E-3.411.

(4) A well constructed solely for the purpose of a test hole.

(5) The construction, repair or abandonment of a water well with a casing diameter of less than six inches by a licensed contractor, excluding public water supply wells, provided a well completion report is submitted in accordance with Rule 40E-3.411 and provided that the well is constructed, repaired or abandoned in accordance with the standards of this chapter.

(6) Wells intended for use as injection wells which have received a permit under Chapter 17-28. Such wells are exempt from the construction standards in Part II provided the applicable standards of Chapter 17-28 are met.

(7) Wells intended for monitoring purposes only which are part of an approved permit issued by the Department of Environmental Regulation.

(8) In addition, wells which satisfy the requirements of Part IV of this Chapter are exempt from the provisions of 40E-3.301, 40E-3.321, 40E-3.411, 40E-3.501, 40E-3.512, 40E-3.517 and 40E-3.351.

Specific Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.303, 373.308, 373.309, 373.313, 373.316, 373.326 FS. History — New 1-1-85.

40E-3.0511 Exceptions and Variances.

(1) The board finds that compliance with all the requirements of Part I of this Rule Chapter may result in an undue hardship for the construction, repair or abandonment of certain wells.

(2) Any affected person may request an exemption from any or all of these rules for an individual well by making written request which must include those specific requirements for which an exemption is requested, any alternate or substitute methods or conditions considered appropriate, and reasons why the exemption is considered necessary.

(3) The District shall grant the exemption by way of a variance if the proposal is in accordance with accepted public health and sanitary engineering principles and practices and will not adversely affect the water resource. The variance shall be the minimum necessary to ameliorate the hardship.

(4) If the request is for a variance from the requirement of obtaining a water use permit, the applicant must demonstrate that an application has been filed and a

compelling necessity exists to commence the construction, repair or modification of a well while an application for a water use permit is pending. Issuance of the variance will not be evidence of any entitlement to the water use permit.

(5) Upon issuance of a variance the District may impose such special conditions as may be necessary to protect the intent and purpose of Part III, Chapter 373, Florida Statutes and this chapter.

(6) The variance under this rule is provided in addition to the variance and waiver procedures set forth in Rule 28-104, F.A.C., which implements Section 120.542, F.S. Specific Authority 120.54(5), 373.044, 373.113, 373.171 FS. Law Implemented 120.54(5), 373.303, 373.308, 373.309, 373.313, 373.316, 373.326 FS. History — New 1-1-85, Amended 12-19-89, 7-2-98, 9-2-98, 6/12/00.

40E-3.101 Content of Application.

(1) Permits will only be issued to the owner or his agent on whose property the well is located.

(2) Applications for permits required by this chapter shall be filed with the District. The application shall contain:

(a) Form "0123" Application to the South Florida Water Management District for the construction, repair or abandonment of water wells,

(b) The name, address, telephone number & license number of the licensed contractor who will be constructing the wells,

(c) The name, address and telephone number of the property owner and his agent, if applicable, on whose property the well is to be drilled,

(d) The location of the well (to the nearest one-quarter section, or latitude and longitude to the nearest second, or Florida coordinate system (state planar coordinates) to the nearest one hundred feet, and site map of the well location, depicting land marks and providing a scale,

(e) The expected depth of the well,

(f) The proposed use of the well,

(g) The estimated daily volume of the proposed use,

(h) The specification for well construction including the size(s) of the casing to be used, the proposed construction, repair, or abandonment specifications including casing types, diameters and depths; open hole or screened intervals, sizes and screen openings; and proposed grouting materials;

(i) The proposed method of construction and completion of the well, or the method of plugging and abandoning of the well,

(j) The proposed pump capacity,

(k) The anticipated starting date,

(l) The District water use permit number, if applicable,

(m) A well completion report and log for any hole which becomes a water well.

(3) The application must be signed by the owner and his authorized agent, if applicable. The application must also be signed by a licensed contractor, if applicable under Rule 40E-3.051(3).

(4) The required fee pursuant to section 40E-3.201 shall be submitted with the permit application.

Specific Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.308, 373.309, 373.313, 373.326, 373.342 FS. History — New 1-1-85, Amended 12-19-89.

40E-3.201 Permit Application Fees. In order to conform with the requirement of Section 373.109, Florida Statutes, the following schedule of non-refundable fees are established:

(1) \$30.00 for a permit application for the construction or repair of any well with a casing diameter of six inches or greater excluding public water supply wells.

(2) For a permit application for the construction or repair of any public water supply well:

(a) \$35.00 for a public water supply well with a casing diameter of less than 6 inches,

(b) \$55.00 for a public water supply well with a casing diameter of 6 inches or greater.

(3) No permit application fee shall be required for the abandonment of any well.

(4) Applicants are exempt from the schedule of permit application fees if:

(a) The construction or repair of a well is for a governmental entity.

Specific Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.109, 373.308, 373.309, 373.313 FS. History — New 1-1-85.

40E-3.301 Conditions for Issuance of Permits.

(1) In order to obtain a permit under this chapter an applicant must submit a permit application as specified in Rule 40E-3.101.

(2) The permit application fee shall accompany the original application according to the fee schedule provided in Rule 40E-3.201.

(3) An applicant must certify that:

(a) the proposed well will comply with the criteria set forth in Part II of this chapter,

(b) the applicant or owner has obtained a water use permit under Chapters 40E-2 or 40E-20, if applicable,

(c) the proposed well will not otherwise adversely affect the water resources.

(4) The application must be complete and meet the requirements of Chapter 373, Florida Statutes, and this chapter.

Specific Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.103, 373.306, 373.308, 373.309, 373.313, 373.342 FS. History — New 1-1-85.

40E-3.321 Duration of Permits. Each permit shall be valid for a period of six (6) months. In the event construction, repair or abandonment is not completed within that time, the District may extend the time limit upon written request by the permittee, provided that the conditions of the original permit application have not changed.

Specific Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.308, 373.309, 373.313, 373.326, 373.342 FS. History — New 1-1-85.

40E-3.341 Suspension and Revocation.

(1) The District may suspend or revoke a permit to construct, repair or abandon a well by written notice to the permittee under any of the following circumstances:

(a) Material misstatement or misrepresentation in the application for a permit;

(b) Failure to comply with the provisions set forth in the permit;

(c) Disregard or violation of any provisions of these rules and regulations or Part III of Chapter 373, Florida Statutes; or

(d) Unforeseen circumstances which may create a danger to the water resources or the public health, safety or welfare if the well is constructed as permitted.

Specific Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.103, 373.306, 373.308, 373.309, 373.313, 373.342 FS. History — New 1-1-85.

40E-3.411 Well Completion Report.

(1) Well completion reports are required for the construction, repair or abandonment of all wells regardless of whether a permit application is required under Rule 40E-3.101. Well completion reports shall be filed with the District within 30 days of the completion of the work.

(2) The water well contractor shall keep or cause to be kept by a registered driller in his employ an accurate log of all construction repair or abandonment activities. Such logs shall be available for inspection at the site during all times when work is in progress.

(3) If no work is performed or if the well is not completed, a report shall be filed within thirty days of the expiration of the permit stating that no well construction was performed under the permit or outlining the status of the incomplete well.

(4) The District may also require that samples be taken during construction and furnished to it with the completion report. If samples are required, the District shall provide containers and instructions.

Specific Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.308, 373.309, 373.313, 373.326, 373.342 FS. History — New 1-1-85.

40E-3.451 Emergency Authorization.

(1) Emergency permits may be issued by the executive director or his designee when one of the following conditions exist that justify the issuance:

(a) an existing well supplying a particular use has failed and must be immediately replaced;

(b) the health, safety, or general welfare of the people of this District would be jeopardized without such authorization;

(c) emergency authorization is needed to immediately mitigate or resolve potentially hazardous degradation of water resources; or

(d) a serious set of unforeseen, and unforeseeable circumstances exists which creates the emergency.

(2) Emergency authorizations shall be administered pursuant to Rule 40E-1.6115, F.A.C.

Specific Authority 373.044, 373.149, 373.171 FS. Law Implemented 373.308, 373.309, 373.313, 373.326, 373.342 FS. History — New 1-1-85, Amended 7-2-98.

40E-3.461 Inspection.

(1) The Department or the District is authorized to inspect any well or abandoned well, including those wells permitted under Part II within its jurisdiction as it deems necessary to insure conformity with applicable standards. Such inspection may include but not be limited to geophysical logging, water level measurements, or other methods. Duly authorized representatives of the Department or the District may, upon proper identification and at reasonable times, enter upon and shall be given access to any premises for the purpose of such inspection.

(2) If, upon the basis of such inspection, the District finds the standards of Part II have not been met, the District may give the owner and contractor, if applicable, a written notice stating which rules have been violated and may order that necessary corrective action be taken within a reasonable length of time to be prescribed in such order.

(3) A site inspection may be conducted by an authorized representative of the District or the Department prior to issuing a permit for construction of a public water supply well.

(4) The District shall be notified at least 24 hours in advance of placement of grout in the annular space of any public water supply well. A district representative may be on site to observe the grouting. If the District is properly notified and a representative is not at the site at the appointed time, the grouting may be accomplished in his absence.

(5) If, upon basis of an inspection, the District finds any well is an abandoned well, the well shall be plugged in accordance with Part II.

Specific Authority 373.044, 373.149, 373.171 FS. Law Implemented 373.103, 373.308, 373.309, 373.319 FS. History — New 1-1-85.

PART II CONSTRUCTION, REPAIR AND ABANDONMENT STANDARDS

40E-3.500 Scope of Part II. The rules in this part relate to the standards and criteria for the construction, repair and abandonment of wells. All wells within the District unless specifically exempted under rule 40E-3.051 must comply with these standards regardless of whether a permit is required under Part I.

Specific Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.308, 373.309, 373.313 FS. History — New 1-1-85.

40E-3.502 Construction Methods. Wells must be so constructed, cased, grouted, plugged, capped, or sealed as to prevent uncontrolled surface flow, uncontrolled movement of water from one aquifer or zone to another, contamination of groundwater or surface water resources, or other adverse impacts. The following shall apply to all construction, repair, or abandonment of wells in the District except:

(1) In those areas exempted by the District with the concurrence of the Department; or

(2) For public water supply wells which wells shall be constructed, repaired or abandoned in accordance with Chapter 17-555, Florida Administrative Code.

Specific Authority 373.044, 373.309, 373.171 FS. Law Implemented 373.306, 373.308, 373.309, 373.113 FS. History — New 1-1-85, Amended 12-19-89.

40E-3.504 Location. Wells shall be located so as not to pose a threat of contamination to the water resource.

Specific Authority 373.044, 373.309, 373.171 FS. Law Implemented 373.306, 373.308, 373.309, 373.113 FS. History — New 1-1-85.

40E-3.507 Casing and Liner Pipe Standards.

(1) Well casing and liner pipe shall be new or shall be pipe or casing in like new condition. Such casing or pipe shall not be used unless free of leaks, corrosion, and dents; is straight and true, and is not out of round. Welded or seamless black or

galvanized pipe or casing, or stainless steel pipe or casing, or approved types of nonmetallic pipe shall be used for well casing or liner pipe. Well casing installed by driving, shall not have less than the dimensions and weights specified in Table 1 unless otherwise approved by the District and shall conform to the American Society for Testing and Materials (ASTM) A53-77A Type S, Grade A except as noted below.

(2) Black or galvanized steel casing or liner pipe set into place without driving shall not have less than the dimensions and weights specified in Table 2 and shall conform to the American Petroleum Institute (API) Standard 5L, Grade A.

Table 1 MINIMUM DIMENSIONS AND WEIGHTS FOR BLACK OR GALVANIZED STEEL CASING OR LINER PIPE INSTALLED BY DRIVING

nominal size (in.)	outside diameter (in.)	wall thickness (in.)	plain end weight (lbs/ft)
3	3.500	0.216	7.58
3.5	4.000	0.226	9.11
4	4.500	0.237 or .188	10.79 or 8.62
5	5.563	0.258	14.62
6	6.625	0.280	18.97
8	8.625	0.277	24.70
10	10.750	0.307	31.20
12	12.750	0.330	43.77

(3) Black or galvanized steel casing installed by driving with a nominal size between 12 and 30 inches shall have a minimum wall thickness of 0.375 inches and shall be of weights as specified by American National Standards for Wrought Steel and Wrought Iron Pipe ANSI B36.10-1970, for standard pipe. Pipe larger than 30 inches shall have a minimum wall thickness of 0.500 inches and shall be of weights as specified by American National Standards for Wrought Steel and Wrought Iron Pipe ANSI B36.10-1970, for standard pipe. Four inch nominal size pipe with a wall thickness of 0.188 shall be certified by the manufacturer to be in accordance with American Petroleum Institute (API) Standard 5L or ASTM A589-73, A120-77, A53-77A, A252-77A Grade 2.

Table 2 MINIMUM DIMENSIONS AND WEIGHTS FOR BLACK OR GALVANIZED STEEL CASING OR LINER PIPE SET INTO PLACE WITHOUT DRIVING

nominal size (in.)	outside diameter (in.)	wall thickness (in.)	plain end weight (lbs/ft)
3	3.500	0.125	4.51
3.5	4.000	0.134	5.53
4	4.500	0.142	6.61
5	5.500	0.154	8.79
5.5	6.000	0.164	10.22
6	6.625	0.185	12.72
8	8.625	0.188	16.90

(4) Black or galvanized steel casing or liner pipe set into place without driving, with an outside diameter less than 3.500 inches shall have a wall thickness of not less than 0.125 inches. Black or galvanized steel casing or liner pipe with a nominal size between 8 and 16 inches shall have a wall thickness of not less than 0.250 inches. Steel casing or liner pipe with a nominal size of 16 inches or more shall have a wall thickness of not less than 0.375 inches.

(5) Stainless steel pipe used for casing or liner pipe shall be Schedule 10S of the American National Standards Institute (ANSI B 36.19-1976), or stronger classification.

(6) Polyvinyl Chloride (PVC) pipe may be used for well casing or liner pipe. Any PVC pipe used to construct a water well shall have been marked by the manufacturer, under a method specified by the National Sanitation Foundation, Ann Arbor, Michigan, as suitable for use in potable water systems. Any PVC pipe larger than 4.5 inches outside diameter used for well construction or repair shall have a working pressure rating of not less than 200 p.s.i. at 73 degrees F or shall be ASA Schedule 40. Other nonmetallic pipe may be approved by the District.

(7) Steel well casing and liner pipe may be joined in a watertight manner by threaded couplings or electrical welding methods. PVC pipe shall be joined by solvent bonded or threaded couplings or other approved method which shall meet the strength requirements of casing as specified in (6) above.

(8) Nonmetallic and stainless steel well casing or liner pipe shall not be installed or seated by driving unless prior approval is obtained from the District.

(a) For well casing or liner pipe installed by driving, the casing or pipe shall not butt together inside threaded couplings unless the joint is electrically welded so as to be completely watertight. A drive shoe is required for use on casing or pipe installed by driving unless exempted by the District.

Specific Authority 373.044, 373.309, 373.171 FS. Law Implemented 373.306, 373.308, 373.309, 373.113 FS. History — New 1-1-85.

40E-3.512 Well Construction Requirements.

(1) In the construction of a well, reasonable caution shall be taken to maintain the premises in sanitary condition and to minimize the entrance of contaminants into the water resource. Water and materials used in construction shall be reasonably free of contamination.

(2) For wells which penetrate multiple aquifers or zones the well shall be completed so as to prevent cross-contamination of different aquifers or zones if significantly different water quality exists between these aquifers or zones and to prevent leakage of water from one aquifer or zone to another aquifer or zone.

(3) For wells finished into unconsolidated aquifers, casing shall extend from above top of grade to the well screen.

(a) The well screen shall be attached to the casing with a watertight seal; or

(b) sealed against the casing with a packer; or

(c) the screen assembly shall overlap the casing by at least ten (10) feet.

(4) For wells finished into consolidated aquifers, a continuous casing shall extend from above top of grade into the top of the aquifer. For artesian wells the casing shall penetrate the entire thickness of the overlying formations above the aquifer or producing zone within the aquifer.

(5) Notwithstanding the provisions of (4) above the District may grant waivers for seating of casing within the confining zone above an artesian aquifer on a case by case basis when, in the opinion of the District, extending casing to the top of the aquifer would present undue hardship, provided that:

(a) the casing extends a sufficient distance into the confining zone so as to prevent movement of water from the artesian aquifer to overlying aquifers;

(b) the District determines that such construction will not adversely affect the water resources.

(6) In all cases casing shall extend from land surface to a minimum of three (3) feet below land surface.

Specific Authority 373.044, 373.309, 373.171 FS. Law Implemented 373.306, 373.308, 373.309, 373.113 FS. History — New 1-1-85.

40E-3.517 Grouting and Sealing. Wells shall be grouted and sealed to protect the water resource from degradation caused by movement of waters along the well annulus either from the surface to the aquifer or between aquifers, and to prevent loss of artesian pressure in artesian aquifers. All wells shall be constructed and sealed using a method which insures that an open or unnaturally permeable annular space does not remain when a well is completed.

(1) The casing shall be centered in the borehole prior to grouting and sealing. In those cases where, during grouting operations, circulation of the grout is lost so that the annular space being grouted cannot be filled in one continuous operation, a tremie pipe

shall be installed in the annular space to a point immediately above the zone of lost circulation and the annulus shall be bridged at that point by sand and other approved material introduced through the pipe. Grouting or sealing of the annular space shall be completed using the pipe or other approved methods. A tremie pipe, or other approved method, may also be used to complete grouting when the total volume of grout to be emplaced exceeds that which can be safely emplaced in one continuous operation. The minimal set time for grouting of casing before drilling operations may continue, shall be 12 hours.

(2) Wells less than four inches in diameter must have a minimum of a one inch annular space for grouting. Wells equal to or greater than four inches in diameter must have an annular space equal to or greater than two inches for grouting.

(3) Wells constructed in unconsolidated formations by any method which creates an annular space shall be grouted no more than ten (10) feet above the top of the screen to land surface.

(4) The District may grant individual exceptions or, with the concurrence of the Department, may exempt any areas of the District from the requirements of grouting the annular space of that part of the well which penetrates an unconsolidated formation, except that the uppermost three feet of the casing must be grouted to provide protection from contaminated surface water.

(5) All other wells shall be grouted from the bottom of the casing to land surface.

(6) Grouting and sealing of water wells shall be accomplished by the practices and methods recommended by section A1-8.4 of AWWA A100-66, AWWA Standard for Deep Wells, American Water Works Association, Inc., or other methods approved by the District.

(7) Wells constructed by methods which require driven well casing are exempt from Rule 40E-3.517(2) and (3), provided the following conditions are met:

(a) Casing shall be driven from land surface to its final depth in a borehole smaller in diameter than nominal outside diameter of the casing used, or be driven from land surface to its final depth ahead of the drill bit;

(b) A drive shoe as defined in Rule 40E-3.021(7) is used;

(c) No annular space exists after casing is installed;

(d) The uppermost three feet of the casing must be grouted to provide protection from contaminated surface water;

(e) The well is sealed in accordance with Rule 40E-3.517(8) and (9);

(f) All other requirements of this part are met.

(8) Temporary Well Seals.

Whenever there is a temporary interruption in work on the well during construction, repair, or abandonment the well opening shall be sealed with a substantial watertight cover. Except for those areas of the District designated by the District with the concurrence of the Department, any well in which pumping equipment is installed seasonally or periodically shall, whenever pumping equipment is not installed, be capped with a watertight cap or valve. If a temporary well seal is installed, an unobstructed inspection port must be provided for wells six (6) inches or greater in diameter.

(9) Permanent Well Seals.

Wells located on ground subject to flooding shall be properly sealed to prevent the movement of contaminants and surface water into the well. The upper end of the well casing shall include a watertight seal with any vent above the 100-year flood level. Pumping equipment and any necessary pipe or electrical connections shall be so installed as to prevent inadvertent introduction of contaminants into the well. Pumping equipment and any necessary piping or electrical connections installed within the casing shall be installed through a well seal. An unobstructed inspection port equipped with a temporary removable plug shall be provided and accessible at the wellhead for wells six (6) inches or greater in diameter.

Specific Authority 373.044, 373.309, 373.171 FS. Law Implemented 373.306, 373.308, 373.309, 373.113 FS. History — New 1-1-85.

40E-3.525 Explosives. The use of explosives in well construction or development is prohibited unless specifically approved pursuant to Chapter 17-532, and section 40E-3.0511, Florida Administrative Code.

Specific Authority 373.044, 373.309, 373.171 FS. Law Implemented 373.306, 373.308, 373.309, 373.113 FS. History — New 1-1-85, Amended 12-19-89.

40E-3.529 — Flowing Wells. If the well flows at land surface, each well shall be provided with a valve pursuant to section 373.206, F.S.

Specific Authority 373.044, 373.309, 373.171 FS. Law Implemented 373.306, 373.308, 373.309, 373.113 FS. History — New 1-1-85.

40E-3.531 Abandoned Well Plugging.

(1) Any well which was not constructed in accordance with the standards of Part II and fails to be corrected upon written notice in accordance with Rule 40E-3.461(2) shall be deemed an abandoned well.

(2) Any well which is an abandoned artesian well under Section 373.203(1), Florida Statutes, shall be plugged in accordance with paragraph (3).

(3) All abandoned wells shall be plugged by filling them from bottom to top with neat cement grout within a time specified by the District, unless otherwise provided in writing by the District. The plugging shall be to restore or improve the hydrologic conditions which existed before the well was constructed. The work shall be accomplished by a licensed water well contractor.

(4) Request to abandon a well shall be submitted on the application form provided by the District.

Specific Authority 373.044, 373.309, 373.171 FS. Law Implemented 373.306, 373.308, 373.309, 373.113 FS. History — New 1-1-85.

PART III DRILLER REGISTRATION STANDARDS

40E-3.700 Scope of Part III.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.308, 373.323, 373.326 FS. History — New 1-1-85, Repealed 12-19-89.

40E-3.721 Driller Registration.

Specific Authority 373.044, 373.113 FS.
Law Implemented 373.308, 373.323, 373.326 FS.
History — New 1-1-85, Repealed 12-19-89.

40E-3.725 Responsibility of Contractor.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.308, 373.323, 373.326 FS.
History — New 1-1-85, Repealed 12-19-89.

40E-3.727 Type of Registration.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.308, 373.323, 373.326 FS.
History — New 1-1-85, Repealed 12-19-89.

40E-3.733 Exemptions.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.308, 373.323, 373.326 FS.
History — New 1-1-85, Repealed 12-19-89.

40E-3.752 Refusal, Suspension, or Revocation of Registration.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.308, 373.323, 373.326 FS.
History — New 1-1-85, Repealed 12-19-89.

40E-3.763 Examinations.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.308, 373.323, 373.326 FS.
History — New 1-1-85, Repealed 12-19-89.

PART IV SPECIFIC GEOGRAPHIC THRESHOLDS

Editorial Note: For current law, see Chapter 40E-30.

40E-3.800 General Permit for Wells.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.309, 373.313, 373.326, 373.342 FS.
History — New 1-1-85, Repealed 1-10-85.

40E-3.810 General Permit for Construction, Repair or Abandonment of Wells.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.309, 373.313, 373.326, 373.342 FS.
History — New 1-1-85, Repealed 1-10-85.

40E-3.815 Notice of Intent.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.309, 373.313, 373.326, 373.342 FS.
History — New 1-1-85, Repealed 1-10-85.

40E-3.820 Request for Additional Information.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.309, 373.313, 373.326, 373.342 FS.
History — New 1-1-85, Repealed 1-10-85.

40E-3.825 Thresholds for South Dade County.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.309, 373.313, 373.326, 373.342 FS.
History — New 1-1-85, Repealed 1-10-85.